Pooled Technology Account Funding Request
Iowa Department of Education
Project EASIER
(Electronic Access System for Iowa Educational Records)

State of Iowa - Return on Investment Program / IT Project Evaluation

Tracking Number (For Project Office Use)

SECTION 1: PROPOSAL

Project Name: Project EASIER Date: 7/21/00

Agency Point of Contact for Project: Leland R. Tack

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Executive Sponsor (Agency Director or Designee) Signature: Ted Stilwill

Is this project necessary for compliance with a Federal standard, initiative, or statute? (If "Yes," cite specific requirement, attach copy of requirement, and explain in Proposal Summary)	Yes
Is this project required by State statute? (If "Yes," explain in Proposal Summary)	Yes
Does this project meet a health, safety or security requirement? (If "Yes," explain in Proposal Summary)	No
Is this project necessary for compliance with an enterprise technology standard? (If "Yes," explain in Proposal Summary)	Yes
Does this project contribute to meeting a strategic goal of government? (If "Yes," explain in Proposal Summary)	Yes
Is this a "research and development" project? (If "Yes," explain in Proposal Summary)	No

PROPOSAL SUMMARY:

The purpose of Project EASIER is to enable Iowa school districts to use Electronic Data Interchange (EDI) to transmit encrypted individual student records, based on national standards, to fulfill information needs associated with student transcripts, student transfers, and state reporting requirements. The use of Electronic Data Interchange also reduces data burden on local schools and encourages better decision making through implementation and maintenance of a cost effective method of accessing and transferring accurate and timely education information among school districts, post-secondary educational institutions, and the Iowa Department of Education through the use of Electronic Data Interchange (EDI). In accordance with Chapter

256.9(18) of the Iowa Code, the Department has established that electronic transmission of student records will become the standard for data required for state and federal reporting needs. In addition the project contributes to meeting the state strategic goals as noted in the 2010 Plan:

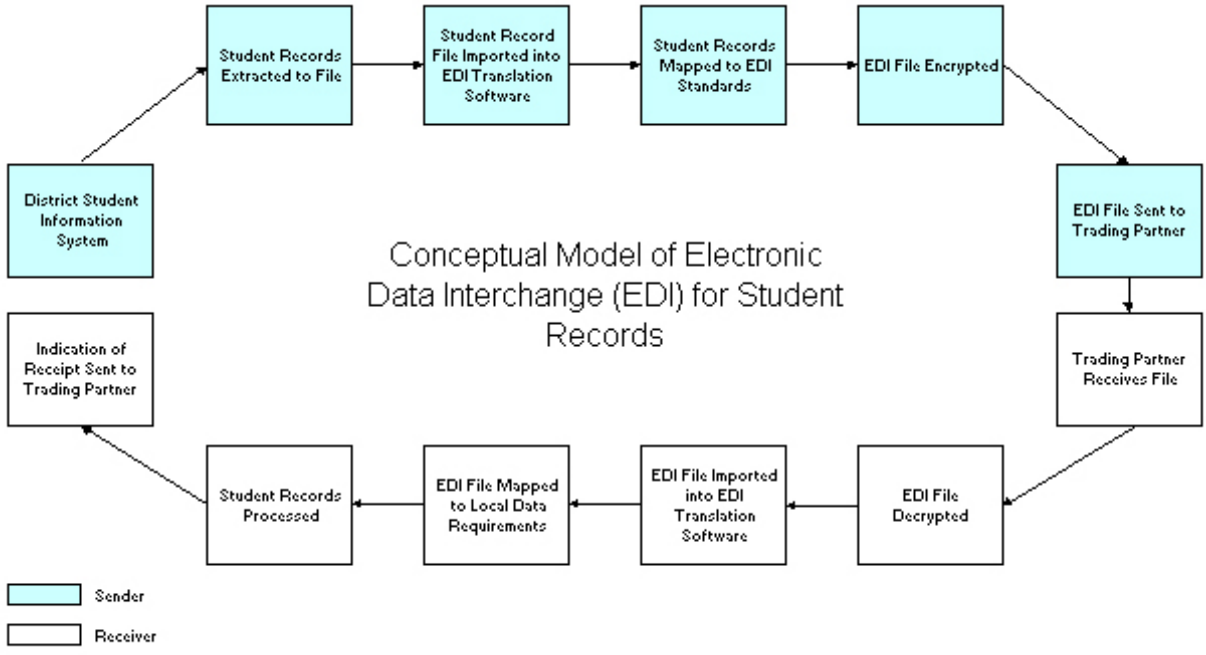
> Goal 2: Iowans are electronically connected to each other and to the world. Access to advanced telecommunications services statewide and a continuing ability to take advantage of emerging technologies have moved Iowa to the forefront in education, e-commerce, e-government, teleworking, telemedicine, community development and other new fields, and revitalized rural economies.

In addition, the project is included in the State Board of Education Strategic Plan under the information strategy that states:

> The State Board and the Department will effectively communicate the needs of the education system and the Department will develop the information systems needed for quality planning, policy development, decision making and accountability.

The National Center for Education Statistics (NCES), U. S. Department of Education, has encouraged states to move toward collecting Federal Common Core Data directly from electronic student information systems. For the last two years, NCES has sponsored a major federal initiative to develop software and strategies to exchange student records involving multiple states at a regional level. They have also supported the development of EDI transaction sets for students, staff and institutions. The NCES has a clear Congressional mandate to support the development of systems that will provide uniform, accurate, and timely data.

A conceptual model of Project EASIER is detailed in the following figure.



Project EASIER offers the opportunity to capitalize on the efforts already made by school districts in keeping track of student information electronically. Electronic Data Interchange sets the standard for Project EASIER. Utilizing standardized formats for data contained in local school district automated student information systems and transmitting individual records electronically means that aggregation of data for required state and federal reports is completed at

the state level, rather than at the local level. It also means that the information included in high school transcripts sent electronically to post-secondary institutions can be received and evaluated by the institutions in a timely and consistent manner, and that individual student records can be transmitted instantaneously when students move from one school district to another. On the post-secondary side, the transmission, receipt and acceptance of student transcripts transmitted in this manner are greatly enhanced since testing of transmissions has been achieved in the preliminary project stages and trading partner agreements are established between sending school districts and receiving post-secondary institutions.

Currently 217 Iowa school districts have committed to Project EASIER and are involved at various stages of project implementation. Close to 130 school districts have submitted information to the Department for required state reports directly from their own electronic student information databases, thus eliminating the need to complete the forms on the Department's web site. The information received from the EDI transmissions is processed by the Department and migrated to the Department's web site for verification by the sending district. In addition, about three-dozen participating districts have used EDI to send test transcripts to the University of Iowa, Iowa State University, University of Northern Iowa, and Kirkwood Community College. Each newly EDI enabled site transmits test transcripts to participating post-secondary institutions as a part of implementation. Plans are well under way to finalize the first production transcript trading partnership between the College Community School District and Kirkwood Community College. The first parallel (paper and electronic data interchange) production partnership involving secondary transcripts was officially established through Project EASIER between the five Des Moines comprehensive high schools and the University of Northern Iowa in July of 2000. Trading began with the first transcript coming from Roosevelt High School. Preliminary work is also currently underway to develop the district-to-district EDI exchange of student records among school districts participating in Project EASIER. Explorations into the use of XML are also being explored in project planning and in pilot study phases.

Current projections, although constrained by the use of PK-12 electronic student information systems at the school district level, call for an additional 75 districts to be added to Project EASIER in the year 2000, bringing the total number of participating school districts to about 275 or about 73 percent of Iowa's current 375 school districts. Also projected is the addition of a limited number of nonpublic schools and private colleges. Working in cooperation with representatives of the three Regents institutions, Project EASIER and Regents institutions have set a goal of enabling at least 50 percent of the remaining 14 Iowa Community Colleges not yet participating during the year 2000. The goal of the project is to have all public school districts transmitting individual student records to fulfill basic student-based reporting requirements and transcript requirements by July of 2002.

SECTION 2: PROJECT PLAN

1. Agency Information

The project has the endorsement and full support of the agency director and the division administrator who supervises overall project planning. The agency also currently has the endorsement, cooperation and active participation of the Regents institutions and support from

other professional education organizations, area education agencies, and local school districts as evidenced by the growth in participation from six school districts in 1995-96 to 217 school districts to date.

Skills necessary for successful project implementation include the following:

- "Grass roots" involvement in planning, testing and implementation
- Collaboration with post-secondary institutions
- Knowledge of local school district student information software
- Understanding of EDI standards and functionality
- Knowledge of Internet and email technical knowledge
- EDI mapping skills
- Communication skills
- Cross platform computer skills

Department of Education staff possesses much of the knowledge and understanding of the above but require assistance from a third party technical provider to resolve highly technical issues, to handle the customer service volume, and to plan for future improvements in the process.

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2. Project Information

Vision

The vision of Project EASIER is:

To provide Iowa's educational community with ready access to information resources in order to enhance services to all students.

Mission

The mission of Project EASIER is:

To reduce data burden and to encourage better decision making by establishing and maintaining a cost-effective method of accessing and transferring accurate and timely education information among school districts, area education agencies, post-secondary institutions and the Iowa Department of Education.

Project Goals

To revise the data collection, reporting, and dissemination systems used by the Department and Iowa's school districts.

To allow school districts to fulfill the reporting requirements of seven of the Department's student-based collection documents from information currently residing on local school district automated student information systems.

To provide for the electronic transfer of student information from one Iowa school district to another as students transfer to other school districts.

To provide access to information for school districts, other state education agencies serving the needs of children, and education constituents, through a data warehouse shared through the Iowa Department of Education web site.

To develop improved functional working partnerships among school districts, post-secondary institutions, area education agencies, and the Department of Education.

Project Objectives:

To eliminate the delays in the sharing of student record information among school districts when students transfer from one Iowa school district to another.

To allow for immediate placement of students into appropriate educational programs when in-state student transfers occur.

To raise the standards for security and confidentiality of shared student information.

To reduce district data burden for state and federal reporting requirements.

To reduce current local school district data burden by leveraging existing technology.

To standardize course transcript information being shared with Iowa post-secondary institutions.

To create more timely and accurate information for policy and decision making for the Iowa Department of Education, the state legislature, and education constituents.

To promote data sharing among state agencies related to information needed to better serve the needs of students.

To encourage better use of student information at the local school district level through ease of access and information sharing.

To promote public support for education through information sharing.

Principles

Iowa is a "local control" state with respect to education, therefore the project allows districts to make use of any automated student information software or platform and seeks to meet whatever technology needs exist for the districts to become successful in meeting project goals.

Districts are involved in the planning and implementation stages of the project at all stages of development and assist in piloting new procedures and processes.

District information needs drive project direction and activities.

Continuous training and communication are built into the project.

Leverage existing technology currently available at the school district level to meet a broader range of needs.

Through project implementation, procedures and activities expand school district capacity to utilize their existing student information to meet the needs of the district.

To date, local school districts, area education agencies, community colleges and Regent's institutions have been involved in the planning, testing and implementation of Project EASIER. As Project EASIER evolved from the planning and testing phase to implementation, other states and the Federal Government have recognized Iowa as a leader in electronic student data transfer. Though other states are implementing parts of Project EASIER, Iowa is the only state committed to district-to-district, district-to-Department of Education and district-to-post-secondary institution transfer of student records, and the only state currently using this technology to collect information from local school for state and federal reporting needs.

Efforts related to management of project activities and procedures are coordinated by Department of Education project staff, as well as with other staff within the agency. In addition, meetings are held with a Statewide Advisory Committee and post-secondary representatives from Regents institutions and community colleges as well as participating school districts and supporting area education agencies. Student software vendors have also been involved in helping districts meet needs related to transmitting data via EDI. Largely through department efforts, two student information vendors have built EDI functionality into their software products.

One of the major advantages of the project for local school districts, colleges and universities and the Department is the improvement in the overall quality, timeliness, security, and accuracy of the data being transmitted. Due to transmitting individual student records, data aggregation is possible for any combination of the data elements received.

Security and privacy of the data being transmitted are increased due to the reduction in the number of people required to handle the data from the originating site to a trading partner. Privacy is maintained by requiring all data transferred through Project EASIER to be encrypted.

3. Current Technology Environment

Software

Districts participating in Project EASEIR are required to have a student information management software package capable of creating a file extract. The Department of Education will assist any district in participating in Project EASIER independent of

software type so long as the software can create file extracts that can be mapped to universal standards (EDI). Examples of student information software packages currently being used in the project are: JMC, Mac School, Win School, SASIXP, and SchoolMaster. Participating districts using JMC require no other application software because the vendor has incorporated the EDI mapping standards into the software package. Participants using other software packages must also have a translation software package to map local data to EDI standards. This software is provided through the project. All participating districts also use encryption software, also provided through the project, to allow data to be encrypted prior to transmission via the Internet. Each district must also have email software capable of sending/receiving attachments in the current MIME standard.

At the Department of Education, VB-script based applications have been created to process the data onto the Department's SQL server. Active Server Pages (ASP) are then utilized to create a web interface for review and certification of the Project EASIER data.

At the participating district level, all operating systems are supported. At the state level, Windows NT 4.0 is used.

To allow the project to operate independent of operating system and application software, EDI standards are being employed to transfer data from site to site. EDI is currently the only universal system structured to allow consistent and reliable data transfer. XML is currently being studied and as this technology matures it may provide a better process for the transfer of data. For data that is transmitted district-to-state, once it has been received and processed by the Department, it is then available to be aggregated and distributed in any needed format.

Hardware

Currently, project participants need a computer capable of running their student information software package. This ranges in some instances from a Power PC 7100 with 8 M of ram, to the biggest and best computer on the market. Macintosh, Windows 3.x, Windows 96/98/NT operating systems are supported within the project.

At the Department, a web server, SQL database server and Windows NT workstations are used to process the data, allow trading partners to review and certify the data, and finally, to warehouse the data.

Currently, all project participants need a standard Internet connection. This may be accomplished via a 56K dial-up or a LAN/T1 connection. Participants in the project vary significantly in their technical sophistication. The bandwidth and connectivity requirements of the project are kept to a minimum at the client side to encourage participation and hold down district costs.

At the state level, current Department network and Internet connections are utilized to receive, process and manage the project.

4. Proposed Environment

Software

Due to the minimal requirements for participation in Project EASIER and the fact that the project supports all operating systems and platforms, no changes in client side software are required for the advancement of the project. All software components are in place to continue district-to-state, and district-to-postsecondary reporting and to advance to district-to-district sharing of student data.

On the state side, current EDI standards offer the most functional and reliable basis for electronic transfer of data. The biggest potential advancement in state processing of electronic data is XML. However, until all trading partners accept and become equipped to utilize XML's potential, EDI remains our best option. Advancements in XML are being researched and monitored by Department staff and it is anticipated that it may be incorporated into the project in the future.

Another potential advancement in server side technology is to move the mapping and translation component to a web-based application. This would eliminate the installation and maintenance of any software at the district level and reduce the minimum computer specifications to any machine with an Internet browser. A centralized application would reduce cost by allowing maintenance and upgrades to occur in one place, reducing district on-site visits for minor changes. This model would also reduce technical support burden on DE staff by providing directions and providing a correction mechanism for resolving data inconsistencies or errors.

Hardware

As Project EASIER progresses, it is our goal to continue to ensure district success in the project with the most minimal hardware. No additional requirements for project participants are foreseen. At the state level, additional server capacity may be necessary to accommodate potential future plans to relieve districts of the data mapping process.

Data Elements

No new data elements will be added to the Department database. However, the transmission of individual student records will allow aggregation of any data elements independently or in combination with other data elements. Software utilized includes; Viacrypt PGP, EDI translation software, and VB-Script applications to migrate school and district data to the Department web site for verification and certification.
The current set of data elements captured through the project have gone through extensive screening by all stakeholders. The current set of data elements is a "best fit" for all parties involved.

Project Schedule

Description of Relevant Past Activities:

6/94	Formation of postsecondary institution alliance
5/95	Formation of the Statewide EDI Advisory Committee
8/95	Development of district to Iowa Department of Education data elements

9/95	Development of district to postsecondary data elements
11/95	Development of budget and timeline for implementation of EDI
1/96	Completion of EDI Implementation and Procedures Guidelines
8/96	Pilot EDI project with 6 school districts
11/96	Expansion of project to 20 school districts
1/97	First successful EDI transmission of data to the Iowa Department of Education from a local school district to fulfill student-based reporting requirements
6/97	First successful EDI test transmission of district to postsecondary
8/97	Expansion of project to 40 school districts
4/98	State legislative appropriation for EDI
8/98	Development of formal documentation of procedures for EDI
1/99	Development of nonpublic school project participation policy
3/99	Expansion of project to 150 school districts
11/99	Alliance with Regents Committee on Education Relations established
7/00	Production transcript partnership established with UNI
7/00	Expansion of project to 217 school districts

Timeline: July, 2000 – July, 2002

Task 1:
Development of the district-to- district EDI components. This includes identification of district-to-district data elements derived through collaborative efforts of the Iowa Department of Education and participating Iowa school districts, and the development of mapping components to allow school districts to receive EDI transmissions from other school districts.

Responsible Parties:
Coleen McClanahan
David J. Alvord

Deliverables:
Creation of EDI software and mapping components that will allow school districts to receive individual student records from sending school districts.

Checkpoints**:**
On-going testing and verification.

Task 2:
Development of Iowa Department of Education data warehouse to facilitate local school district access to summary level education information.

Responsible Parties:
Roger Petersen
David J. Alvord
Joe DeHart
Greg Truckenmiller

Deliverables**:**

Creation of a web site database that will facilitate the dissemination of summary level comparative data for Iowa schools. Information categories will include components on student and staff demographics, course information, and status information with respect to dropouts, post-secondary intentions, graduates, and units required for graduation.

Checkpoints:

On-going testing and verification

Task 3:

Increasing the number of participating school districts, nonpublic schools, and Iowa community colleges engaged in EDI trading partner activities to include all community colleges and all public school districts and nonpublic schools with functional automated student information systems in place at the local level.

Responsible Parties:

Coleen McClanahan
Roger Petersen

Deliverables**:**

Creation of a statewide trading partner network of Iowa public school districts, nonpublic schools, community colleges, and Regents institutions that supports the exchange of student records via EDI.

Checkpoints**:**

Each new site must complete pre-enablement tasks that are evaluated by Project staff. Also perform test transmissions on-site as part of the enablement process. These checkpoints occur as sites are ready.

Task 4:

Expand the current set of school district-to-Department of Education data elements to include data elements for additional reporting documents.

Responsible Parties:

Coleen McClanahan
David J. Alvord
Roger Petersen

Checkpoints**:**

On-going developmental task evaluated as it moves forward.

Deliverables**:**

Reduction of data burden at the local school district level through the elimination of the manual preparation of additional state reports.

SECTION 3: RETURN ON INVESTMENT FINANCIAL ANALYSIS

Project Budget:

Provide the estimated project cost by expense category.

	FY01
Personnel	$171,000
Software	$ 18,000
Hardware	$ 0
Training	$ 20,000
Facilities	$ 0
Professional Services	$168,000
Supplies	$ 0
Tech Assistance Comm Coll	$100,000
Develop AEA Support Network…	$ 50,000
Total	$527,000

Project Funding:

Provide the estimated project cost by funding source.

State Funds	$297,000	56	% of total cost
Federal Funds	$ 0	0	% of total cost
Local Gov. Funds	$ 0	0	% of total cost
Private Funds	$ 0	0	% of total cost
FY00 Carry Over	$230,000	44	% of total cost
Total Cost:	$527,000	100	% of total cost

How much of the cost would be incurred by your agency from normal operating budgets (staff, equipment, etc.)? $123,000 23%

How much of the cost would be paid by "requested IT project funding"? ...$174,000 33%

Provide the estimated project cost by fiscal year: FY01 $527,000

Annual project maintenance is estimated to be $350,000. In addition, there is a one time $50,000 contractor expense for necessary technical assistance to local school districts.

ROI Financial Worksheet

Annual Pre-Project Cost - How You Perform The Function(s) Now	
FTE Cost (salary plus benefits):	
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	
A. Total Annual Pre-Project Cost:	
Annual Post-Project Cost – How You Propose to Perform the Function(s)	
FTE Cost:	
Support Cost (i.e. office supplies, telephone, pagers, travel, etc.):	
Other Cost (expense items other than FTEs & support costs, i.e. indirect costs if applicable, etc.):	
B. Total Annual Post-Project Cost:	
State Government Benefit (= A-B):	
Annual Benefit Summary	
State Government Benefit:	
Citizen Benefit (including quantifiable "hidden taxes"):	
Opportunity Value and Risk/Loss Avoidance Benefit:	
C. Total Annual Project Benefit:	
D. Total Annual Project Cost:	
Benefit / Cost Ratio (C / D):	———
ROI (C – D / Project Funds Requested):	_____%
X Benefits Not Cost Related or Quantifiable (including non-quantifiable "hidden taxes")	

(see following page for explanation)

Benefits Not Cost related or Quantifiable Description

Benefits to School Districts

Rating	Description
9	Considerably less time required to file Basic Educational Data Survey Reports
10	Accuracy of data I greatly improved
8	Almost all districts have purchased/developed electronic student information systems (prerequisite for participation)
8	Technology is better integrated into daily functions
9	The process leverages existing technology at the district level
10	Process stimulates and encourages use of school district data for planning, identifying, and meeting district needs on a "data-driven basis"

Benefits to Students

Rating	Description
8	Transcripts are sent to colleges and universities and eventually to other school districts in a timely and efficient manner
10	Transcripts are accurate, secure, and remain confidential

Benefits to Post-secondary Institutions

Rating	Description
10	Post-secondary endorse and actively support standardized national course code classification system adopted by the project as a means of greatly reducing time needed to evaluate courses appearing on student transcripts
8	Project technology is consistent and compatible with post-secondary technology currently in use and promotes improved collaboration among secondary school and post-secondary institutions

Benefits to the Department of Education

7	Data required for state and federal reporting is received in a timely manner
10	Data is more uniformly defined and is more accurate
10	Data is collected at the lowest unit (student) and can be summarized in many ways and can be related to all other data elements (relational database)